

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously presented) A non-naturally occurring enterokinase-cleavable fusion protein comprising a polypeptide comprising the formula:
(1) $Z_1\text{-Xaa}_1\text{-Xaa}_2\text{-Xaa}_3\text{-Xaa}_4\text{-Asp-Arg-Xaa}_5\text{-Z}_2$ (SEQ ID NO:1),
wherein
(a) Z_1 is a ligand recognition sequence;
(b) $\text{Xaa}_1\text{-Xaa}_2\text{-Xaa}_3\text{-Xaa}_4\text{-Asp-Arg}$ is an enterokinase recognition sequence, in which
 Xaa_1 is Ala, Asp, Glu, Phe, Gly, Ile, Asn, Ser, or Val;
 Xaa_2 is Ala, Asp, Glu, His, Ile, Leu, Met, Gln or Ser;
 Xaa_3 is Asp, Glu, Phe, His, Ile, Met, Asn, Pro, Val, or Trp; and
 Xaa_4 - is Ala, Asp, Glu, or Thr; and
(c) $\text{Xaa}_5\text{-Z}_2$ is a protein of interest, in which Xaa_5 can be any amino acid and Z_2 is a polypeptide of at least one amino acid.
2. (Previously presented) The fusion protein of claim 1, wherein
 Xaa_1 is Asp,
 Xaa_2 is Ile,
 Xaa_3 is Asn,
 Xaa_4 -is Asp, and
 Xaa_5 -is Met, Thr, Ser, Ala, Asp, Leu, Phe, Asn, Trp, Ile, Gln, Glu, His, Val, Gly or Tyr.
3. (Previously canceled)

4. (Previously presented) The fusion protein of claim 1, wherein the ligand recognition sequence Z_1 is a streptavidin binding domain.

5. (Original) The fusion protein of claim 4, wherein the streptavidin binding domain is selected from the sequences: His-Pro-Gln-Phe (SEQ ID NO:6), Cys-His-Pro-Gln-Phe-Cys (SEQ ID NO:5), Cys-His-Pro-Gln-Phe-Cys-Ser-Trp-Arg (SEQ ID NO:7), Trp-His-Pro-Gln-Phe-Ser-Ser (SEQ ID NO:210), Pro-Cys-His-Pro-Gln-Phe-Pro-Arg-Cys-Tyr (SEQ ID NO:211), and tandemly arranged combinations and repeats thereof.

6. —49. (Previously canceled)

50. (Previously presented) The fusion protein according to claim 1, wherein said ligand recognition sequence Z_1 is selected from the group consisting of: streptavidin, avidin, an antibody, a peptide antigen recognized by the antibody, the Myc-tag, the Flag peptide, the KT3 epitope peptide, an α -tubulin epitope peptide, a polyhistidine tag, a chitin binding domain, maltose binding protein (MBP), and the α T7 gene 10-protein peptide tag.

51. (Previously presented) The fusion protein according to claim 1, wherein incubation of said polypeptide (SEQ ID NO:1) with enterokinase yields the protein of interest Xaa_5-Z_2 .